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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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|-----------------|-------------|----------------------|---------------------|------------------|

10/708,644

03/17/2004

Yi-Chen Guo

12696-US-PA

2643

31561

7590

07/27/2006

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE

7 FLOOR-1, NO. 100

ROOSEVELT ROAD, SECTION 2

TAIPEI, 100

TAIWAN

EXAMINER

HUANG, WEN WU

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 07/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/708,644

Applicant(s)

GUO, YI-CHEN

Examiner

Wen W. Huang

Art Unit

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Wilding (US. 6,934,562 B1).

Regarding **claim 1**, Wilding teaches a wireless transmitting/receiving circulator circuit serving as a signal transmission/reception interface between a wireless device (see Wilding, fig. 2, components 250 and 255) and an antenna (see Wilding, fig. 2, component 225) such that signals falling within a first waveband are received (see

Wilding, fig. 2, component 250) and signals within a second waveband are transmitted (see Wilding, fig. 2, component 255), the circulator circuit comprising:

a first band-pass filter (see Wilding, fig. 2, component 215) coupled to a receiving end of the wireless device (see Wilding, fig. 2, component 250) and the antenna (see Wilding, fig. 2, component 225) for receiving signals from the antenna, filtering the signals to produce receiving signals and transmitting the receiving signals to the receiving end of the wireless device (see Wilding, col. 4, lines 36-39);

a filter (see Wilding, fig. 2, component 230) coupled to the antenna for blocking signals falling within the second waveband picked up by the antenna (see Wilding, col. 4, lines 39-42); and

a second band-pass filter (see Wilding, fig. 2, component 242b) coupled to a transmitting end of the wireless device (see Wilding, fig. 2, component 255) and the filter (see Wilding, fig. 2, component 230) for receiving signals from the transmitting end, filtering the signals to produce transmitting signals and transmitting the transmitting signal via the antenna after passing through the filter (see Wilding, col. 6, lines 6-9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 2 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilding as applied to claim 1 above, and further in view of Band-pass filters – Chapter 8: FILTERS – Volume II – AC (http://www.allaboutcircuits.com/vol_2/chpt_8/4.html ; hereinafter “Band-pass filters”).

Regarding **claim 2**, Wilding teaches the circulator circuit of claim 1.

Wilding is silent to teaching that wherein the first band-pass filter further comprises: a low-pass filter coupled to the antenna; and a high-pass filter coupled to the low-pass filter and the receiving end of the wireless device. However, the claimed limitation is well known in the art as evidenced by Band-pass filters.

Band-pass filters teaches a band-pass filter comprises: a low-pass filter and a high-pass filter (see Band-pass filters, first paragraph and first figure), wherein the input signal (from the antenna of Wilding) of the band-pass filter is passed through LPF then the HPF to the output of the band-pass filter (to the Receiver 250 of Wilding).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Wilding and the well-known knowledge shown by Band-pass filter in order to implement the band-pass filter as suggested by Wilding.

Regarding **claim 6**, Wilding teaches the circulator circuit of claim 1.

Wilding is silent to teaching that the second band-pass filter further comprises: a low-pass filter coupled to a transmitting end of the wireless device; and a high-pass filter

coupled to the low-pass filter and the filter. However, the claimed limitation is well known in the art as evidenced by Band-pass filters.

Band-pass filters teaches a band-pass filter comprises: a low-pass filter and a high-pass filter (see Band-pass filters, first paragraph and first figure), wherein the input signal (from the Transmitter 255 of Wilding) of the band-pass filter is passed through the LPF, the HPF then to the output of the band-pass filter (to the antenna of Wilding).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Wilding and the well-known knowledge shown by Band-pass filter in order to implement the band-pass filter as suggested by Wilding.

3. Claims 3, 4, 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wilding and Band-pass filters as applied to claims 2 and 6, respectively above, and further in view of Song (US PUB NO. 2003/0090882 A1).

Regarding **claim 3**, the combination of Wilding and Band-pass filters teaches the circulator circuit of claim 2.

The combination of Wilding and Band-pass filters is silent to teaching that wherein the low-pass filter further comprises: an inductor with one end coupled to the antenna; and a capacitor with one end connected to a ground and another end coupled to another end of the inductor and the high-pass filter. However, the claimed limitation is well known in the art as the LC filter and further evidenced by Song.

Song teaches a LC low-pass filter (see Song, para. [0017]) comprises: an inductor with one end coupled to the antenna (see Song, fig. 5, L2); and a capacitor with one end connected to a ground and another end coupled to another end of the inductor and the high-pass filter (see Song, fig. 5, C).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Wilding and Band-pass filters with the teaching of Song in order to implement the low-pass filter as suggested by Band-pass filters.

Regarding **claim 4**, the combination of Wilding and Band-pass filters teaches the circulator circuit of claim 2.

the combination of Wilding and Band-pass filters is silent to teaching that wherein the high-pass filter further comprises: a capacitor with one end coupled to the low-pass filter; and an inductor with one end coupled to a ground and another end coupled to the other end of the capacitor and the receiving end of the wireless device. However, the claimed limitation is well known in the art as the LC filter and further evidenced by Song.

Song teaches a LC high-pass filter (see Song, para. [0014]) comprises: a capacitor with one end coupled to the low-pass filter (see Song, fig. 2, C2); and an inductor with one end coupled to a ground and another end coupled to the other end of the capacitor and the receiving end of the wireless device (see Song, fig. L1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Wilding and Band-pass

filters with the teaching of Song in order to implement the high-pass filter as suggested by Band-pass filters.

Regarding **claims 7 and 8**, the dependent claims are interpreted and rejected for the same reasons as set forth above in claims 3 and 4, respectively.

4. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wilding as applied to claim 1 above, and further in view of Song.

Regarding claim 5, Wilding teaches the circulator circuit of claim 1.

Wilding is silent to teaching that wherein the filter further comprises: a capacitor with one end coupled to the antenna; and an inductor with one end connected to a ground and another end coupled to the other end of the capacitor. However, the claimed limitation is well known in the art as the LC filter and further evidenced by Song.

Song teaches a LC high-pass filter (see Song, para. [0014]) comprises: a capacitor with one end coupled to the antenna (see Song, fig. 2, C2); and an inductor with one end coupled to a ground and another end coupled to the other end of the capacitor (see Song, fig. L1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to combine the teaching of Wilding and Band-pass filters with the teaching of Song in order to implement the high-pass filter as suggested by Band-pass filters.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wen W. Huang whose telephone number is (571) 272-7852. The examiner can normally be reached on 10am - 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nay A. Maung can be reached on (571) 272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

wwh

W
7/23/06

Quochien B. Vuong 7/24/06

QUOCHIEN B. VUONG
PRIMARY EXAMINER